

IN THE CLAIMS:

Listing of Claims:

These claims will replace all prior versions of claims in the present application.

1. (Currently Amended) A method for inspecting leakage of a container, comprising:
a differential pressure generation step of generating a differential pressure between the inside and the outside of a the container;
an ozone gas addition step of adding ozone gas to a higher pressure side of the inside and the outside of the container;
an ozone concentration detection step of measuring an ozone concentration of a lower pressure side of the inside and the outside of the container; and
a leakage determination step of determining presence of the leakage of the container based on a change in the ozone concentration, wherein
the leakage determination step has an ozone concentration comparison step of calculating a concentration difference between the ozone concentration and a predetermined ozone concentration, and an ozone concentration determination step of determining presence of leakage when the concentration difference is larger than a predetermined value.

2. (Original) The method according to claim 1,
wherein the differential pressure generation step has a container storage step of storing the container in a storage container, and a container pressurization/pressure reduction step of operating one of pressurization and pressure reduction for one of the container and the storage container.

3. (Original) The method according to claim 1,

wherein the ozone gas addition step has an ozone gas generation step of generating ozone gas from the atmosphere, and an ozone gas feeding step of feeding the ozone gas to the higher pressure side of the inside and the outside.

4. (Original) The method according to claim 1,

wherein the ozone concentration detection step has an ozone concentration measuring step of measuring an ozone concentration in a lower part of the inside or the outside by an ozone sensor, and an ozone concentration signal output step of outputting a signal corresponding to the measured ozone concentration.

5. (Canceled)

6. (Original) The method according to claim 1,

wherein the container is used as a container in which liquid is sealed.

7. (Currently amended) An apparatus for inspecting leakage of a container, comprising:

a storage container for storing ~~a~~the container therein in a sealed state;

a pressurization/pressure reduction device communicating with one of the container and the storage container to operate one of pressurization and pressure reduction;

an ozone gas feeder for feeding ozone gas to a higher internal pressure side of the container and the storage container;

an ozone concentration detector for measuring an ozone concentration in a lower internal pressure side of the container and the storage container, wherein the ozone

concentration detector outputs an ozone concentration signal corresponding to the ozone concentration measured; and

a leakage determination device connected to receive the ozone concentration signal outputted by the ozone concentration detector,

wherein the leakage determination device calculates a concentration difference between the ozone concentration measured and a predetermined ozone concentration and determines presence of leakage in the container when the ozone concentration exceeds a predetermined value.

8. (Currently Amended) A method for inspecting leakage of a container, comprising the steps of:

generating a differential pressure between an inside and an outside of ~~a~~the container;

adding ozone gas to a higher pressure side of the inside and the outside of the container;

measuring an ozone concentration of a lower pressure side of the inside and the outside of the container; and

determining presence of the leakage of the container based on a change in the ozone concentration, wherein determining leakage includes calculating a concentration difference between the ozone concentration measured and a predetermined ozone concentration, and determining presence of leakage when the concentration difference is larger than a predetermined value.

9. (New) A method for inspecting leakage of a container, comprising:

a differential pressure generation step of generating a differential pressure between the inside and the outside of the container;

an ozone gas addition step of adding ozone gas to a higher pressure side of the inside and the outside of the container;

an ozone concentration detection step of measuring an ozone concentration of a lower pressure side of the inside and the outside of the container; and

a leakage determination step of determining presence of the leakage of the container based on a change in the ozone concentration, wherein

the leakage determination step has an ozone concentration comparison step of calculating a concentration difference between the ozone concentration and a predetermined ozone concentration, and an ozone concentration determination step of determining presence of leakage when the concentration difference is larger than a predetermined value, and further

wherein the differential pressure generation step has a container storage step of storing the container in a storage container, and a container pressurization/pressure reduction step of operating one of pressurization and pressure reduction for one of the container and the storage container.